**REMARKS/ARGUMENTS**

This case has been carefully reviewed and analyzed in view of the Official Action dated 18 January 2006. Responsive to the Office Action, Claims 1, 4-6, 8-10, 18, 21, 27, 29 and 32 have been amended to clarify their respective recitations. Claims 3, 12 and 31 have been cancelled by this Amendment. Claims 1, 2, 4-11, 13-30 and 32 will be pending in the subject Patent Application upon entry of this Amendment.

The Examiner rejected Claims 4-10 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner indicated that the offending Claims recite the limitation "the second difference value" without having established proper antecedence for such recitation. Claim 1 has been amended to recite, among other beneficial features of the invention, "a second difference value" and Claims 4 - 6 and 8-10 have been amended to depend from Claim 1. It is now believed that the Claims recite unambiguously the invention of the subject Patent Application.

In the Official Action, the Examiner also rejected Claims 1-3, 11, 13, 18-20, and 24-30 under 35 U.S.C. § 102(e) as being anticipated by Kawakatsu, et al. (U.S. Patent #6,907,072; hereinafter "Kawakatsu"). In setting forth these rejections, the Examiner correlated features of Kawakatsu with the invention of the subject Patent Application, including "receiving a packet loss probability value (col.7, lines 24-30)", "calculating an

estimated inter distortion value ... based at least on the packet loss probability value",

"calculating an estimated intra distortion value ... based at least on the packet loss

probability value" and "determining a first difference value based on a difference

between the estimated intra distortion value and the estimated inter distortion value (18 of

fig. 8), and a second difference value based on a difference between the first bit quantity

value and the second bit quantity value (26 and 27 of fig. 8)."

The Examiner rejected also Claims 14-17 under 35 U.S.C. § 103(a) as being

unpatentable over Kawakatsu in view of Ribas-Cobera, et al. (US Patent # 6,968,008;

hereinafter "Ribas-Cobera"). The Examiner acknowledged in the Official Action that

Kawakatsu does not disclose the claimed transition factor corresponding to half-pixel

horizontal and vertical propagation strength and relied on Ribas-Cobera for such

disclosure. The Examiner rejected further Claim 22-23 and 32 under 35 U.S.C. § 103(a)

as being unpatentable over Kawakatsu in view of Walker (US Patent # 6,222,881). The

Examiner stated that Kawakatsu fails to disclose the use of a weighting factor calculated

by a plurality of intra distortion values using corresponding different quantization

parameters and selecting the weighting factor that results in the lowest distortion value

meeting a first bit-rate criterion. The Examiner relied on Walker for showing an

encoding method selection routine and stated that inclusion of such into Kawakatsu

would have been obvious to one of ordinary skill in the art to use finer quantization in encoding those regions to which the human eye is more coding-error sensitive.

The invention of the subject Patent Application, as one of its many beneficial features, determines a macroblock encoding scheme based on possible packet loss. Thus, as recited in the amended Claims of the subject Patent Application, the invention includes, "receiving a packet loss probability value", which is used for "calculating an estimated inter distortion value for [a] first macroblock" and "calculating an estimated intra distortion value for the first macroblock". The encoding type is then "one of an intra macroblock and an inter macroblock" based on, at least, "a difference between the estimated inter distortion value and the estimated intra distortion value".

The full combination of these and other features recited by the amended Claims of the subject Patent Application are nowhere disclosed by Kawakatsu. Whereas, the Examiner noted references to "probability" in Kawakatsu at column 7, lines 24-30, the cited passage describes a typical variable-length encoding procedure, where "a short code is assigned to a signal with a high probability of occurrence, and a long code is assigned to a signal with a low probability of occurrence". As is known in the art and is clear from the cited passage, variable-length encoding selects a code for a corresponding symbol based on the likelihood that the symbol will be used in transmission. When a symbol is less likely to occur in a particular symbol transmission scheme, it is given a longer code

length in terms of a number of bits and when a symbol is more likely to occur in the same scheme, it is given a shorter code. In this way, for a given number of bits, more symbols of a typical message may be transmitted, because the often-used symbols are shorter in length and the seldom-used symbols, which may not even be used at all in a typical transmission, are assigned to longer codes. As an example using the English alphabet, the symbols for the letters "Q" and "W" may be assigned to much longer codes than the codes for the letters "O" and "L". Consequently, the message "Hello World" may be transmitted in a fewer number of bits than if the letters of the entire alphabet are each given codes of the same length. Clearly, establishing the code length of a symbol based on its probability of occurrence cannot be construed as selecting an encoding type based on a probability of a packet being lost during transmission. Thus, the reference does not disclose "receiving a packet loss probability value" and, since the reference does not show or suggest this claimed limitation, the invention of the subject Patent Application should be allowable over Kawakatsu in view of 35 U.S.C. § 102 for that reason alone.

The decision as to whether a block is encoded by inter-coding or intra-coding in Kawakatsu is based on the assumption that, "A block from which a large amount of information is generated is more likely to receive an error than a block from which a small amount of data is generated" (col. 10, lines 40-52). Careful analysis of Kawakatsu reveals that this assumption is the fundamental principle under which Kawakatsu's

encoder operates with regard to the encoding decision. Despite the Examiner's citations to the contrary, nowhere is it discussed or even suggested in Kawakatsu that an amount of distortion is analyzed towards selecting thereby the encoding of a block by either inter-coding or intra-coding, where the distortion is determined by "calculating an estimated inter distortion value for the first macroblock based on at least the packet loss probability value" and by "calculating an estimated intra distortion value for the first macroblock based on at least the packet loss probability value", and then analyzed by a "difference value based on a difference between the estimated intra distortion value and the estimated inter distortion value", as is implemented by Applicants' invention, as now claimed. Further, as incorporating these claimed features of the invention of the subject Patent Application into Kawakatsu would **require a change in a fundamental operating principle thereof**, regardless of the state of the art at the time Applicants' invention was made, it is believed that the invention is allowable over Kawakatsu in view of 35 U.S.C. § 103.

Given such contrary teachings of the primarily cited Kawakatsu reference, the secondarily cited Ribas-Corbera and Walker references are believe quite ineffectual to the present patentability analysis. These references were cited by the Examiner as showing certain implementation details which are not sufficient to remedy the deficiencies of Kawakatsu's teachings for reasons discussed above. Those reasons

notwithstanding, neither reference makes any mention of the analysis of distortion through calculations based on a packet loss probability value. Additionally, the remaining references cited by the Examiner, but not used in the rejections, have been reviewed and are believed to be further removed from the Patent Application than the references used by the Examiner when patentable considerations are taken into account.

Independent Claims 18 and 24 recite "receiving a packet loss probability value", "calculating an estimated inter distortion value for the first macroblock based on at least the packet loss probability value...", "calculating an estimated intra distortion value for the first macroblock based on at least the packet loss probability value" and selecting the encoding type as one of an intra macroblock and an inter macroblock "based at least in part on a difference between the estimated inter distortion value and the estimated intra distortion value". It is respectfully submitted that these limitations in combination with other limitations recited in the amended Claims of the subject Patent Application are not shown in the references cited by the Examiner, even when those references are combined. Thus, Applicants' invention so claimed is neither anticipated nor made obvious by those references.

In the Official Action, the Examiner objected to Claims 12, 21 and 31 as being dependent upon a rejected base Claims and indicated that the Claims would be allowable if rewritten in independent form, including all of the limitations of their respective base

Claims and any intervening Claims. Claim 1 has been rewritten to incorporate the subject matter of Claim 12, Claim 27 has been rewritten to incorporate the subject matter of Claim 31 and Claims 12 and 31 have been canceled. Both Claim 1 and Claim 27 are now believed allowable given the Examiner's indication of allowable subject matter.

Additionally, the dependent Claims of the subject Patent Application, as now amended, recite by inherency the limitations of the independent Claims on which they are based and should be allowable for **at least** the same reasons for which the independent Claims are allowable.

It is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

Respectfully submitted,
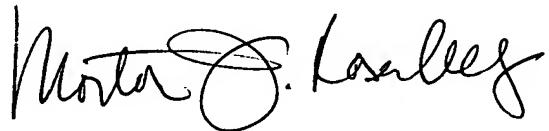
Morton J. Rosenberg
Registration #26,049

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Rosenberg, Klein & Lee
3458 Ellicott Center Drive
Suite 101
Ellicott City, MD 21043
410-465-6678
**Customer No. 04586**